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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,139	12/11/2003	Xiaoming Wang		7392

7590 02/06/2006  
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EXAMINER

JACKSON, BRYAN M

ART UNIT PAPER NUMBER

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Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/733,139	<b>Applicant(s)</b> WANG ET AL.	
	<b>Examiner</b> Bryan M. Jackson	<b>Art Unit</b> 3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-15 is/are rejected.
- 7) ☐ Claim(s) 12,16-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

An Information disclosure statement (IDS) was not submitted with application 10/733139.

### ***Claim Objections***

Claims 12 and 16-17 are objected to under 37 CFR 1.75(c) as being in improper form because the multiple dependent claim recites the limitations "claim 1 and 2" and "claims 1,2 and 11". See MPEP § 608.01(n). Accordingly, claims 12 and 16-17 have not been further treated on the merits. It is suggested to use the term "or" instead of "and".

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 1-17, the examiner makes an inquiry into whether the applicant desires to claim a method or an apparatus. If a method is claimed, an active method step must be provided. If an apparatus is claimed, structure(s) of the apparatus must be provided. It is suggested to use an active voice, such as "applying a signal with an average frequency range of 8-14 Hz"; "changing the amplitude from high to low", etc.

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As to claim 1, an average frequency range of 8-14 Hz and a peak frequency of 11-12 Hz are recited. The examiner has an inquiry as to why the frequency ranges conflict.

As to claim 2, the claim is incomplete for omitting structured relationship between elements – the claim is a listing of parts.

As to claims 3-4, “an integrated circuit” is stated – it is unclear if this is the same circuit from claim 2 or a different circuit.

As to claims 5-7, “a circuit” is stated – it is unclear if this is the same circuit from claim 2 or a different circuit.

As to claim 5, “the timer” lacks antecedent basis.

As to claims 6-7, “the signal” lacks antecedent basis.

As to claim 8, “the filtered signals” lack antecedent basis.

As to claim 9, “one switch” lacks antecedent basis.

As to claims 10-11, the claims are incomplete for omitting structural relationship between elements, for not connecting the pushbuttons to any other element.

As to claim 12, “a transducer” lacks antecedent basis, it cannot be determined what elements are being claimed and what functions are produced.

As to claims 13-15, since they depend on claim 11, “a transducer” lacks antecedent basis because transducer was recited in claim 12.

As to claim 13, “a conductor” lacks antecedent basis, the claim is incomplete for omitting structural relationship between elements.

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As to claim 14, "a static magnet" lacks antecedent basis, the claim is incomplete for omitting structural relationship between elements.

As to claim 15, "a magnet" lacks antecedent basis.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Yanagidaira (5954629). Yanagidaira discloses an electrical signal of alpha waveform having an amplitude ranging from 10 to 100- $\mu$ V, wherein 100- $\mu$ V is considered a high voltage and 10- $\mu$ V is considered a low voltage, a frequency ranging from 8 to 14 Hz utilizing a center frequency (col 2, ln 24-28), an amplifier (fig 1, 29) for amplifying a band-pass filtered signal, and an automatic gain control circuit (AGC) (fig 1, 26).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagidaira in view of Meland (4227516). Yanagidaira discloses the claimed invention except for the timer (claim 5). Meland teaches that it is known to use timer for electrical stimulation of the body (claims 1 and 15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the alpha wave inducing system, as taught by Yanagidaira, with a timer for electrical stimulation of the body, as taught by Meland, in order to provide a means for timing alpha waveform stimulation to the body.

Regarding claim 10, Yanagidaira and Meland disclose the claimed invention but does not disclose expressly the time periods of 10 minutes and 20 minutes. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the alpha wave inducing system with an adjustable current amplitude and a timer, as taught by Yanagidaira and Meland, with the time periods of 10 and 20 minutes, because Applicant has not disclosed that alpha rhythm stimulation for approximately 10 and 20 minutes provides an advantage, is used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected the Applicant's invention to perform equally well with the alpha wave inducing system with adjustable current amplitudes and a timer, as taught by Yanagidaira and Meland, because it provides alpha rhythm waveform stimulation for a specified time period, and since it appears to be an arbitrary design consideration which fails to patentably distinguish over Yanagidaira and Meland.

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Therefore, it would have been an obvious matter of design choice to modify Yanagidaira and Meland to obtain the invention as specified in the claim(s).

Regarding claims 9-11, Yanagidaira and Meland disclose the claimed invention but does not disclose expressly one or two pushbuttons. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the alpha wave inducing system with adjustable current amplitudes and a timer, as taught by Yanagidaira and Meland, with the pushbutton for power and two pushbuttons for switching between time and amplitude settings of 10 or 20 minutes and low/high, respectively, because Applicant has not disclosed that one or more pushbuttons provides an advantage, is used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected the Applicant's invention to perform equally well with the alpha wave inducing system with adjustable current amplitudes and a timer, as taught by Yanagidaira and Meland, because it provides alpha rhythm waveform stimulation for a specified time period, and since it appears to be an arbitrary design consideration which fails to patentably distinguish over Yanagidaira and Meland.

Therefore, it would have been an obvious matter of design choice to modify Yanagidaira and Meland to obtain the invention as specified in the claim(s).

Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagidaira in view of Ballentine (3762396).

Yanagidaira discloses the claimed invention except for the use of a transducer (claims 12-15). Ballentine teaches that it is known to use a transducer (fig 6, 60) for inducing sleep via electrical stimulation, wherein a transducer inherently contains a magnet for transforming electrical signals into other forms of energy. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the alpha wave inducing system, as taught by Yanagidaira, with the use of a transducer for inducing sleep via electrical stimulation, as taught by Ballentine, in order to provide a transducer for use in an alpha wave inducing system.

Yanagidaira discloses the claimed invention except for the use of alpha rhythm for treating sleep disorders (claim 17). Ballentine teaches that it is known to use a method for inducing sleep via an alpha rhythm signal (abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the alpha wave inducing system, as taught by Yanagidaira, with using alpha rhythm waveforms to treat sleep disorders, as taught by Ballentine, in order to provide a sleeping disorder treatment utilizing alpha waveform stimulation to the body.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gall (5289438) discloses a method and system for altering consciousness. Carter (RE36348) discloses a method and apparatus for changing brain wave frequency. Monroe (5356368) discloses a method of and



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apparatus for inducing desired states of consciousness. Mori (20010003145) discloses a judgment method of the brain wave activity and the brain wave activity quantification measurement equipment. Suffin (6622036) discloses a method for classifying and treating physiologic brain imbalances using quantitative EEG.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan M. Jackson whose telephone number is 571-272-7335. The examiner can normally be reached on Monday through Friday, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
GEORGE R. EVANISKO  
PRIMARY EXAMINER

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